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Editor: Mr. P.J. Dalton, School of Plant Science, University of Tasmania, Private Bag 55, Hobart, Tasmania, Australia. 7001. Ph: (03) 62 267873, Fax: (03) 62 262698. E-mail: P.J.Dalton@utas.edu.au
Website: http://www.utas.edu.au/docs/plant_science/abn/index.htm

The mountains and valleys of Pohangina, Palmerston North, was the locality for bryologists at the 21st John Child Workshop, December 2005, New Zealand.
The Te Apiti wind farm was never far from view on many of our collecting trips.

Cover Page

Bryologists at the Pohangina workshop from back (left to right) are: John Braggins, Barbara Polly, Leon Perrie, Paula Warren, Josh Duff, Lynette Fischer, Lyn Cave, Susan Hansard, David Glenny, Patrick Brownsey, Bill Malcolm, Darea Sherratt, Nancy Malcolm, Amy Hawcroft, Peter Beveridge, Barbara Parris, Alison Knight.
Front: Lesley van Essen, Jessica Beever, Jill Rapson, Mia Mistral, Enid Asquith, Elizabeth Madgewick, Rodney Lewington and Paddy Dalton is behind the camera.
Editor's note: Elizabeth Madgewick died suddenly in May 2006. A tribute to her involvement with the New Zealand bryophyte community will appear in the next newsletter.

21st John Child Bryophyte Workshop 8-13 December 2005

On Thursday 8th December, workshop participants converged on the Highland Home Christian Camp in the Pohangina Valley, a short drive from Palmerston North on the North Island. We were welcomed by Lynette Fischer and Susan Hansard, who had found the excellent facilities for us. The bunkrooms were new, and the meeting room very spacious, with a lovely outlook. There was even a Christmas tree! It was obvious from the start that this was to be a very well organised and comfortable workshop.

"The Organisers"
Susan Hansard and Lynette Fischer (standing) provided a varied and interesting workshop agenda, while Rodney Lewington (master of the finance spreadsheet) ensured that the fine details were all accountable.

Those who arrived early were able to begin collecting immediately, following tracks in the nearby Pohangina Valley Domain. I began my (unintentionally) large collection of specimens of the ubiquitous *Racopilum* spp. at this site. Each specimen I found over the next few days looked slightly different in colour and habit from previous ones, but despite my best efforts, examination under the microscope revealed only two species, *R. cuspidigerum* and *R. strumiferum.*
Predictions of heavy rain for the next five days had everyone checking the weather bulletins supplied regularly by Melvyn Smith, the manager of the camp. Expecting (and getting) rain the next day, excursions were taken to locations close to the camp, to allow for speedy retreats to shelter, and of course to the microscopes. We set out, with maps carefully colour coded for us, to explore several sites. The Totara Reserve Fern Walk proved to be a pleasant stroll through forest dominated by tawa (*Beilschmiedia tawa*), with bryophytes clothing trunks and branches, and the ground covered with the beautiful umbrella moss, *Hypopterygium filiculaeforme*. Interesting hepatics were also encountered, *Cyanolophocolea echinella*, the cells of which contain distinct bluish oil bodies and at the creek bank the epiphytic hornwort *Dendroceros* (*D. validus*?). Further along the road, the Kahikatea Walk led through an area near the riverbank. Many of the trees were damaged by snowfalls a few years ago, leading to an opening up of the canopy. Some keen collectors also visited the Pohangina Field Centre, where the forest included rimu (*Dacrydium cupressinum*) and totara (*Podocarpus totara*). Many species of bryophytes covered the rocks, earth and logs, whilst others grew as epiphytes, including the moss *Calyptopogon mnioides* with multicellular gemmae.

While some boys played others worked

Was it the festive season or preparation for the world cup, whatever, the hepaticologists were not to be distracted as they worked through a heap of collections

On Saturday, reassured that the weather would hold, we set out for the "Big One" i.e. Wharite Peak. At 920m, and renowned as one of the windiest places in New Zealand, the summit is often under cloud, but our luck held. On the way, we inspected the Te Apiti Wind Farm on its flanks. For many of us, the sight of so many wind generators was novel, and the sound of the circling vanes much quieter than expected. At the summit we found a dense shrubbery of leatherwood (*Olearia colensoi*) and *Brachyglottis elaeagnifolia* that, at about 2 metres tall, effectively concealed most of the bryologists who plunged into it. The branches and stems were dripping with bryophytes such as *Cladomnion ericoides, Macromitrium microstomum, Daltonia splachnoides* and both *Weymouthia cochlearifolia* and *W. mollis*. Characteristic subalpine hepatics were also plentiful and these included *Lepicolea attenuata*, *Lepicolea scolopendra* and *Herbertus oldfieldianus*. Lower down the mountain, the vegetation consisted almost entirely of horopito *(Pseudowintera axillaris*) forming very dense stands. While bryophytes and ferns were abundant underneath, low light levels restricted the growth of other vascular species.

By Sunday, the morning dawned fine, and we left for No. 1 Line, a road leading in to the Ruahine Forest Park. Most people were content to follow the track through the broadleaf forest, while a few hardy souls diverted down a short steep track that dropped to the Matanganui Stream below. Interesting bryophytes seen included *Tetraphidopsis pusilla* with its brood bodies at the end of the stems and *Catharomnion ciliatum* that clothed the trunks of the tree fern, *Cyathea*. The return trip to camp gave us the opportunity to travel through the famed Manawatu Gorge. Collections were made at either end of the gorge, and for some the opportunity to sit out the showers of rain in the comfort of the coffee shop proved irresistible.

Jessica Beever and Bill Malcolm are captured determining the site locality, while Nancy Malcolm and Barbara Polly (standing) await the outcome of their discussion

Our final day was spent on the Sledge Track and the Back Track in the foothills of the Tararua Range, just south of Palmerston North. A gradual climb through remnant broadleaf forest along the side of the Kahuterawa Stream gave plenty of opportunity to observe bryophytes at close range.
Some more adventurous folk were also able to include a visit to the Piripiri Road Caves, a limestone area close to Pohangina. These were located along the steep-sided river gorge, Ano Whiro Stream, and access was by amateur abseiling prior to the positioning of an extension ladder. Our efforts were well rewarded with superb fruiting material of *Monoclea forsteri* and the endemic moss, *Beeveria distichophylloides* bearing clusters of filamentous brood bodies at the apex of the extended stem apex.

Monoclea forsteri
This is one of the largest and most distinctive thallose liverworts. It is widespread in New Zealand where it grows along rocky streams nearly always in deep shade

Evening programmes were carefully managed, allowing participants plenty of time to work with their collections. On the first evening, Bill Malcolm gave an illustrated presentation on the mechanism of dehiscence in moss capsules. His excellent photographs were a taste of what we can expect to find in his forthcoming book. Following our field trip to Wharite, Amy Hawcroft from the Department of Conservation at Wanganui explained the ecosystem collapse that had occurred there, due to grazing by possums. In addition, Paula Warren spoke about new measures being planned concerning collecting permits, a response to WAI 262, and the implications for professional and amateur bryologists. A very lively discussion followed!
This was a very happy Workshop indeed, with excellent and comfortable accommodation, and all possible details attended to. Bravo Lynette and Susan, and thankyou for all your work. Thanks also to Rodney Lewington, whose mastery of the finance spreadsheet is now well known, and to all the willing drivers who provided the transport.

Lyn Cave, Tasmanian Herbarium and Paddy Dalton, School of Plant Science, University of Tasmania

New and interesting bryophyte records from Australia and New Zealand

New to Australia

Bazzania angusta (Steph.) Herz.
QLD: (1) Bellenden Ker, Centre Peak, Wooroonooran National Park, 1550 m asl; in stunted forest on moderate slope beside small stream, on semi-shaded treelet; coll. H. Streimann (no. 64345) & T. Pócs 1999, CANB 607649.1. (2) Bellenden Ker, South Peak, Wooroonooran National Park, 1550 m asl; low Lauraceae-dominated forest on gentle slope, on rocks in small seasonal creek; coll. H. Streimann (no. 27443) 1983, CBG 8305403 (dupl. JE, NICH, H). (3) Tinaroo Range, Mt Haig, 1200 m asl; on tree trunk with *Hymenophyllum*; coll. M.M.J. van Balgooy (no. 1585A), CBG 8209369.
Note: In this very distinctive species, known otherwise only from New Caledonia, the leaves are very broadly and roundly ovate, almost as wide as long (typically 1.6 × 1.3 mm, 3-fid at the apex and always

dentate around much of the distal margin. The underleaves are not much smaller than the leaves (typically 1.2 × 0.9 mm). The cells in both leaves and underleaves are nodulose and have large, often confluent trigones, and the underleaves have a distinct border of hyaline cells. *B. angusta* (Steph.) Tix. is the same species; Tixiér made the combination in 1985, apparently unaware that Herzog had already done the same in 1949.

Bazzania bilobata N. Kitigawa

QLD: Windsor Tableland, 45 km north-west of Mossman, 1200 m asl; in stunted open 'rainforest' on ridge, in tree crown [on disintegrating bark]; coll. H. Streimann 1984 (no. 29616), CBG 8407787, dupl. NICH, JE, NY.

Note: *Bazzania bilobata* is immediately recognisable by the bifid, 1-connate leaves, bilobed underleaves, and finely but densely papillose cuticle of both leaves and underleaves. The underleaves are wholly chlorophyllose, and both leaves and underleaves have large, often confluent trigones. The only other records of this unusual species are the type, from northern Thailand, and one collection from China. Some other bidentate species from South East Asia might turn out to be the same thing.

Bazzania caudistipula (Steph.) Inoue & Miller

QLD: Cardwell Range, Echo and Davidson Creek divide, south-east of Ravenshoe, 780 m asl; in rainforest on side of gentle ridge, on upper trunk of *Amoora*; coll. H. Streimann (no. 29108) 1984, CBG 8407236.

Note: *Bazzania caudistipula* is distinguished from all other Australian species so far known by its remarkable underleaves, which are large, almost quadrate, and deeply laciniate-lacerate, with laciniae also at the basal margins. It is the only known Australian member of the section Appendiculatae. Otherwise it is known only from the Philippines and Samoa. However, is very similar to some other Asian species of this section, some of which have been separated on minor features and might turn out to be the same species.

Bazzania densa (Sande-Lac.) Schiffn.

QLD: (1) Mossman Gorge, on wet rock in virgin rainforest along river; coll. W.A. Weber (no. B-31681) 1968, CANB 00566399 (dupl. MELU 2911). (2) Mossman Gorge, in tropical rainforest; coll. G.A.M. Scott 1986, MELU 312. (3) Mt Tyson Track, near Tully, 480 m asl, on rocks in creek in lowland rainforest; coll. J.A. Curnow (no. 3658) 1990, CBG 9408745 (dupl. NSW, HO, OTA, NY, NICH, H). (4) Myall Creek, on moist sandy moss bank just above water level; coll. M. Godwin 1984, MUCV 6189.

Note: This is one of a number of species with a wide distribution throughout South East Asia and the western Pacific. It might turn out to be the same as several other tropical Asian species, including the widespread *B. pectinata*. It has been reported also from the Philippines, Malaysia, Indonesia and Samoa, and probably will be found also in New Guinea and the islands to its east. Its main distinguishing characters are falcate ovate-lingulate leaves that often have a sharp change of angle on the ventral margin, and small, wholly chlorophyllose underleaves, not much wider than the stem, with crenulate or lightly toothed margins, connate with the leaves on both sides. In the leaf there is a narrow patch of slightly larger cells running from the base to well beyond mid-leaf, but it is not a vitta. The leaf apex is rather weakly 3-fid or sometimes 2-fid.

Bazzania fallax (Sande-Lac.) Schiffn.

QLD: Culpha Creek Catchment, Cardwell Range, 41 km south-east of Ranveshoe; coll. H. Streimann (no. 29008) 1984, CBG 8407136 (dupl. JE).

Note: A very distinctive bilobed species in which the leaves are commonly swept upwards towards the shoot apex, and the underleaves are repand to weakly lobed. Known in Australia so far from this single sparse collection; also known from several islands in South East Asia.

Bazzania gedeana (Steph.) Meijer

QLD: Cardwell Range, near Cardwell, 750 m asl; on rock in rainforest on broad ridge; coll. H. Streimann 1984 (no. 28627), CBG 8406634, dupl. NICH, JE, NY, H.

Note: *Bazzania gedeana* is easily recognised by the large, broadly tridentate leaves and the wholly chlorophyllose underleaves that are lobed all round. Several species have been synonymised with it, and several more from South East Asia probably deserve to be.

Bazzania involuta* var. *submutica (Lindenb. & Gott.) Engel & Merr.
TAS: (1) Coffin Bay, Port Davey, 1 m asl; mixed with other bryophytes in mat under scrub; coll. A. Moscal 1987 (no. 13782A), HO 522744, HO 307018. (2) Kathleen Island, Port Davey, 10 m asl; mixed with other bryophytes on skeletal soil with intermittent seepage on heath slope; coll. A. Moscal 1987 (no. 25798), HO 522558.
Note: This small variety is reportedly quite common in New Zealand. It was once allied to *B. adnexa*, but Engel & Merrill (1994) transferred it, with good reason, to *involuta* as a variety. Most branches are lateral rather than pseudodichotomous, and weaker than the main stem. The leaves are strongly convex and curled to the ventral side, even when moist. The underleaves are much smaller than the lateral leaves, and may consist wholly of incrassate cells or have a narrow to wide margin of thin-walled cells. The variety *involuta* also occurs in Tasmania (see below).
Bazzania loricata (Nees) Trev.
QLD: Cook District, Mt Lewis, summit ridge, 1200 m asl; on smooth-barked tree trunk in rainforest; coll. D. Verdon 1983 (no. 5370), CBG 8301474.
Note: This is a widespread species in South East Asia, from Thailand to Malaysia, the Philippines, Indonesia, New Guinea and Solomon Islands. It is easily recognised by the more or less widely triangular and entire leaves, finely denticulate in the upper third, and the large subcircular underleaves, which may be denticulate on the margins and often have a 1–2-cell border of hyaline cells. The leaf cells are clearly trigonous and nodulose, and the underleaves are connate with the leaves on both sides. Several other South East Asian species are probably the same thing.
Bazzania morokensis (Steph.) Grolle
QLD: Mt Tyson Track, 2 km west of Tully, 480 m asl; in lowland rainforest beside deep rocky creek on way to Scouts Rock, on rocks in creek; coll. J.A. Curnow 1990 (no. 3658), HO 318787 ex CBG.
Note: Previously known from New Guinea and Solomon Islands. It is a very distinct species because of the combination of connate, vittate leaves and wholly chlorophyllose underleaves with several large, distinctly triangular lobes. The perianth is narrow in the upper half but slightly widened and ciliate at the mouth. As with *B. loricata*, some other species from South East Asia and Oceania are probably the same thing.
Bazzania nova Engel & Merr.
QLD, representative specimens: (1) Arthur Bailey Road, near Ravenshoe, 900 m asl; on *Cryptocarya* trunk; coll. J.A. Curnow (no. 3896) & H. Streimann, 1990, CBG 9409850. (2) McIlwraith Range, near Coen, 460 m asl; track to old Leo Creek Mine; in tropical forest on broad ridge, on upper trunk of fallen tree; coll. H. Streimann (no. 56726) 1995, CBG 9518770. (3) Old Mill Road, west of Ingham, 640 m asl; in *Eucalyptus* and *Casuarina* dominated vegetation on very gentle slope, on base of treelet; coll. H. Streimann (no. 28319) 1984, CANB 00566339. (4) Track to Mt Misery, near Cooktown, 760 m asl; in rainforest on moderately steep slope, on shaded tree trunk; coll. H. Streimann (no. 57460), CANB 9606417.
Note: The type of *Bazzania nova* is from New Zealand, where the species is very rare (Engel & Merrill 1994). It seems to be not so rare in northern Queensland, which might in fact be the core of its distribution. At first glance it resembles *Bazzania nitida*, especially as both species have small apical teeth that are bent to the ventral side and thus invisible from the dorsal side. But *B. nitida* has a pronounced vitta in the leaf, and its underleaves have (3–) 4 lobes that are never branched. In *B. nova* there is no vitta (only a patch of larger cells in mid-leaf), and the underleaves have 4–6(–8) lobes that are sometimes branched. In the Australian *B. nova* material the leaves are somewhat brittle rather than caducous, and the trigones are quite large but not so bulging as those described in the type.
Lepidozia fugax Engel
TAS: Cradle Mtn – Lake St Clair National Park, Shadow Lake trail; on side of rotting log in *Nothofagus* forest; coll. Dec. 2005. Specimen to be lodged in HO, dupl. MELU, F.
Note: This recently described species was previously known only from two collections in New Zealand (Engel & Schuster 2001). It is readily distinguished from all other *Lepidozia* in the region by the strongly caducous tips of the leaf lobes, which give the plant a very untidy appearance rather like *L. eenii* of Queensland. The most similar species in the region are *L. laevifolia* and *L. pumila*.

Lepidozia hirta Steph.
TAS: Holwell Gorge, on rotten log in wet sclerophyll forest; coll. Dec. 2005. Specimen to be lodged in HO.
Note: This species resembles a small *L. ulothrix*, but lacks the ciliate lobes of that species. It is also more regularly pinnate, and the branches are often whip-like and become attached to the substrate (Engel & Schuster 2001). It is quite common at Holwell Gorge and will no doubt turn up in other collections from Tasmania, and perhaps Victoria. It was previously known only from New Zealand.
Lepidozia pumila Engel
TAS: Cradle Mtn – Lake St Clair National Park, Shadow Lake trail; on rotting base of *Nothofagus cunninghamii*; coll. Dec. 2005. Specimen to be lodged in HO.
Note: This species would be easily mistaken for *L. laevifolia* in the field, but the cells are not at all papillose and the leaves are more asymmetric. For a full description and differentiation from other species, see Engel & Schuster (2001).
Telaranea quinquespina (Engel & Merr.) Engel & Merr.
TAS: near Strahan, road to Macquarie Heads; in coastal heathland, on humic soil in dense shade, with *Kurzia compacta*; coll. Dec. 2005. Specimen to be lodged in HO, dupl. MELU.
Note: This species was previously known only from a few scattered localities in New Zealand. It is similar to *T. herzogii*, as its leaves consist almost wholly of long, spine-like multicelled lobes. But in *T. quinquespina* each leaf lobe usually has a base two cells wide, and the underleaves are remarkably asymmetrical, one being like a leaf lobe but the other reduced to only a cell or two, topped by a slime papilla. *T. herzogii* is a plant of wet forest and rainforest, whereas *T. quinquespina* seems to be able to tolerate quite dry conditions. Both are fully described and illustrated in Engel & Merrill (2004).

New to mainland Australia

Triandrophyllum subtrifidum (Hook.f. & Tayl.) Fulford & Hatcher
VIC: West Tyers River, c. 780 m asl; on soil in horizontal crevice of large granite boulder in the river; coll. Feb. 2006. Specimen in MEL, dupl. MELU.
Notes: This species was known previously from Tasmania and New Zealand. It was found at a *Treubia tasmanica* site being monitored by Dr Neville Scarlett. There *T. subtrifidum* grows mainly in its more compact form, distinctly yellow-green with closely overlapping 2-fid and 3-fid involute lateral leaves with smaller but similar underleaves. It is well described in Allison & Child (1975), but an extra useful character is that the leaf cuticle is distinctly striolate. The oil bodies — previously unreported — are small, botryoidal, ellipsoid to spindle-shape, rather brownish in transmitted light, usually 3–5 per cell but up to 8. This is the first record of the family Herbertaceae from Victoria.

Confirmed for Australia and new to New Zealand

Bazzania accreta (Lehm. & Lindenb.) Trev.
NEW ZEALAND: Stewart Island, 1350 ft [c. 440 m] asl; in tall Manuka scrub, epiphytic on *Leptospermum scoparium*; coll. G.A.M. Scott (s.n.), 1964. OTA 008212.
TAS (representative specimens): (1) Road from Daisy Dell to Murchison Hwy, 17 km from Daisy Dell, 950 m asl; on rotting log in CTRF; coll. J.A. Curnow (no. 4332) 1992, NSW451374 (2) King William Saddle, 14 km SW of Derwent Bridge, 900 m asl; on base of *Eucalyptus* in *Nothofagus* forest; coll. J.A. Curnow (no. 4384) & H. Lepp, 1992, NSW451375. (3) Mt Kate, Central Highlands, 950 m asl; on trunk of *Arthrotaxis selaginoides* in closed forest; coll. A. Moscal (no. 28275) 1996, HO522618. (4) Anthony Road, 6.5 km E of Rosebery, 500 m asl; on shaded tree trunk in *Nothofagus* forest; coll. H. Streimann (no. 59595) 1997, CBG9803276.
Note: Scott (1985) considered *Bazzania accreta* to be a likely synonym of *B. involuta*, which he considered to be the same as *B. adnexa*, but all three are very distinct species. In *B. accreta* the leaves are narrow and almost oblong, about 1.5 × 0.5 mm, tapering hardly at all to a wide apex where there are three large, divergent lobes. The underleaves are more or less quadrate, longer than wide, with the upper 1/8 to 1/2 consisting of hyaline cells. Specimens have often been labelled *B. novae-zelandiae,* but that is a much larger species, with leaves (2–) 3–4 mm long, wide at the base and narrow at the apex, with small converging

lobes, and the hyaline border in the underleaves is never more than a few cells deep. I have seen only one genuine Tasmanian collection of *B. novae-zelandiae* (from Port Davey in the far south-west). The Stewart Island specimen is the only known record for New Zealand. *B. accreta* is very common in the western half of Tasmania. All records from the Australian mainland are other species.

Bazzania involuta* var. *involuta (Mont.) Trev.

TAS: Adamson Peak; on rock; coll. L. Rodway (s.n.), 1918, HO 88215.

Note: *B. involuta* var. *involuta* is fairly common in New Zealand, but this collection is the only one known from Australia. A new collection from the area would be invaluable, but unfortunately the locality information is very vague.

New to the Northern Territory

Acrolejeunea securifolia (Nees) Steph. & Watts **subsp. *securifolia***

(1) Arnhem Land, Lightning Dreaming; on bark of *Ilex arnhemensis* in spring closed forest dominated by *Syzygium angophoides*; coll. J. Russell-Smith (no. 1218) 1984; DNA. (2) Arnhem Land, Lightning Dreaming; on rock ledge of seasonal waterfall in *Allosyncarpia ternata* closed forest; coll. J. Russell-Smith (no. 1220) 1984; DNA.

Notes: *Acrolejeunea securifolia* is a widespread species in eastern Melanesia, Australasia and the South Pacific. Subspecies *securifolia* is confined to Australia (including Lord Howe Island and Norfolk Island) and New Zealand. These records are the most westerly for this subspecies to date.

Other interesting records

Pedinophyllum monoicum (Steph.) Grolle

VIC: Bogong High Plains, White Rocks Creek at top of falls in subalpine zone, on soil next to trickle at side of creek, under dense shrub layer; coll. 2004; MELU not yet accessioned.

Note: This species is very distinctive even when sterile, as in this specimen. The shoots are prostrate, lacking underleaves (vestigial ones may be present on fertile shoots), with pale rhizoids. Branching is uncommon. Leaves are succubously inserted but oriented almost longitudinally, very thin and delicate, and the cells are thin-walled throughout with minute or no trigones, the cells hexagonal in mid-leaf but squarish near the margins. *P. monoicum* is known otherwise only from a very few sites in New Zealand (all probably in *Nothofagus* forest) and one other site in Australia (McLean & Meagher 2001). It is listed as threatened in Victoria under the state's *Flora and Fauna Guarantee Act 1988*, and would certainly meet the criteria for national listing. In New Zealand it is considered to be nationally threatened, with a 'sparse' classification (Glenny & Fife 2005).

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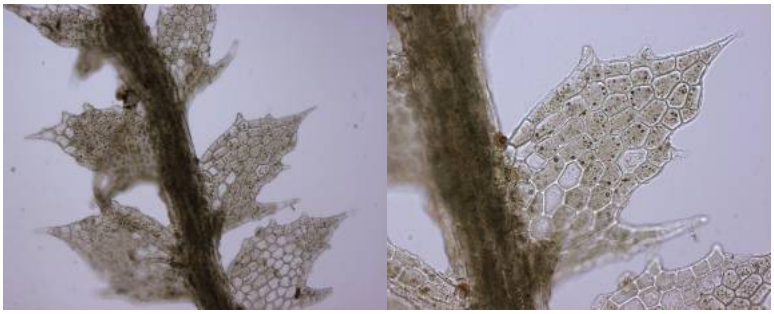
David Meagher, School of Botany, The University of Melbourne, Victoria.

Hepatic records for Australia and New Zealand.

New to Australia

Acrobolbus spinifolius R.M.Schust. J. Hattori Bot. Lab. 90: 137. 2001.



Ventral view of shoot (left), and leaf close up (right). MR.

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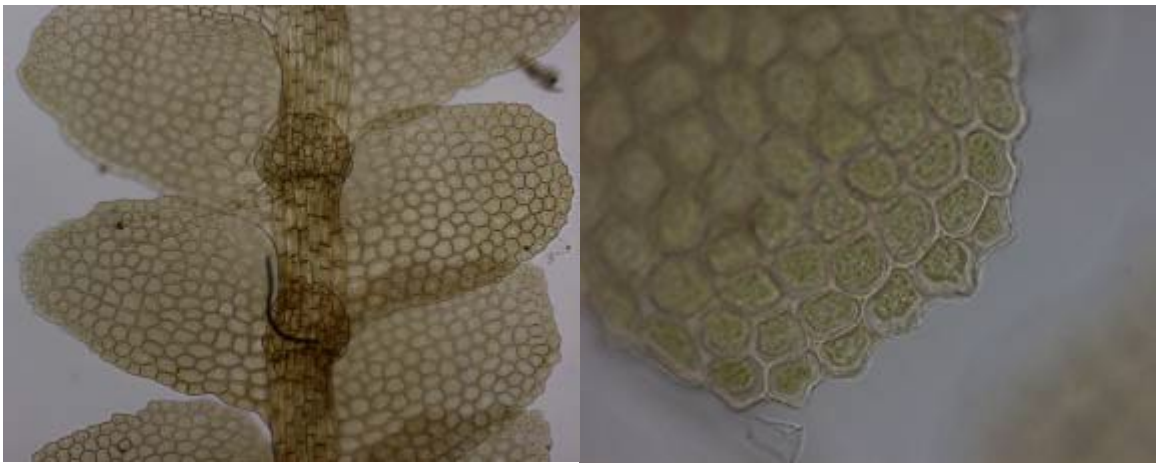
This species was described by Schuster (2001) based on material collected from the West Coast of New Zealand's South Island. Our Tasmanian record is based on a few stems encountered within a packet of *Clasmatocolea* (presented as *Lejeunea cuspidistipula*) collected from the Central Highlands region.

Acrobolbus spinifolius is recognized by its unequally bilobed leaves that are armed with a number of irregular acicular marginal teeth, and for this feature is unique within the genus. Schuster (2001) reports that weak forms of *Tylimanthus tenellus* are similar; indeed *Tylimanthus* and *Acrobolbus* are closely related. However, *Tylimanthus*, has shoots divided into indeterminate, microphyllous, plagiotropic branches that hug (or are buried within) the substrate from which determinate leafy branches arise as found, whereas in *Acrobolbus* the branches are all leafy and creep over the substrate. The Tasmanian material seen consists of a number of weak shoots, that, apart from not expressing the vestigial underleaves illustrated by Schuster (2001), agree in all other details with his description and illustration of this species.

Tasmania, Central Highlands, Liffey River, in association with *Clasmatocolea* on branches of *Nothofagus cunninghamii* wet forest with emergent *Eucalyptus delegatensis*. 41º 43'S, 146º 44'E, 840 m, A. Moscal 17798, 22 April 1989, HO531504.

Mnioloma novaezelandiae (Lehm.) R.M.Schust. Frag. Fl. Geobot. 40: 833. 1995.



Mnioloma novaezelandiae ventral view of shoot (left) and lobe margin (right) from Australian material. MR.

The warm brown colour of this species is distinctive, and in combination with the incubously inserted, unlobed leaves is unmistakable. Diagnostically *Mnioloma* is distinguished from *Calypogeia* by its complete lack of lateral branching, branches being exclusively ventral-intercalary in origin. The lack of terminal branching also distinguishes it from *Bazzania*, to which it is superficially similar. *Mnioloma* was recorded recently from New Zealand, the specimen upon which this record is based has been described as *Mnioloma*

novaezelandiae by Engel (2006). Australian material is also referable to this species. *Mnioloma novaezelandiae* was collected twice around the summit region of Mt. Bartle Frere, where it grows epiphytically on bryophyte festooned tree trunks in well-lit situations.
MAM Renner 2219 (NSW not yet accessioned).

Interesting Australian records

Siphonolejeunea schiffneri (Steph.) Herzog.

Siphonolejeunea schiffneri ventral view of shoot (left) and lobule (right). MR.

Siphonolejeunea is a member of Lejeuneaceae subf. Tuyamaelloideae, a small subfamily whose species are distributed South East from Asia, through Melanesia, Australasia and across to Patagonia. One of the distinctive characters of this subfamily is that the junction of the lobule and stem is constricted so that the lobule is united with the stem by three or four cells only. Subfamily Cololejeuneoideae also has this feature, but this subfamily universally lacks underleaves. Once subfamilial orientation has been established, the identity of this plant is immediately obvious for the ovate leaves with narrow cylindrical lobules that have the antical margin completely inrolled, and turned toward the shoot apex at their outer end. This species was collected incidentally as a co-epiphyll growing with *Otolejeunea australiensis* at Paluma on the VIIIth Australasian Bryophyte Workshop, and is listed as an additional name in McCarthy (2003).
MAM Renner 1593. (NSW not yet accessioned)

Tuyamaella serratistipula S.Hattori. Bot. Mag. Tokyo 64: 118. 1951

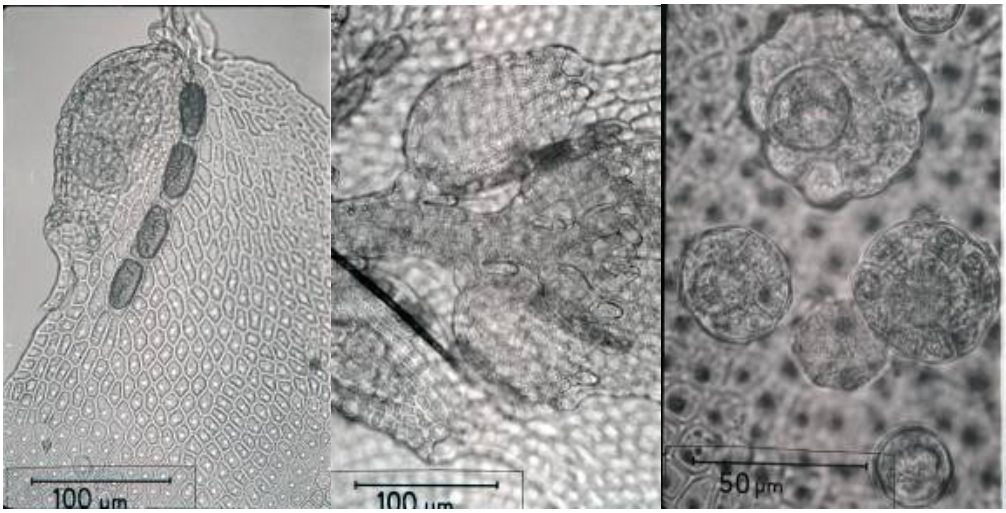
Tuyamaella serratistipula ventral view of shoot (left), hyaline lobe border (centre left), two hooked teeth at lobule apex (centre right), distinctive areolation at lobe base (right). MR.

Tuyamaella serratistipula is a distinctive species, and is identifiable in the field. Plants are large for subfamily Tuyamaelloideae, brown green, and have a hyaline lobe border that is visible with a hand lens. The possession of underleaves rules out subfamily Cololejeuneoideae, the only other lejeuneoid subfamily containing species possessing a hyaline leaf border. The lobule apex is two celled, the teeth are slightly

hooked, and the lobule is constricted at its base. The long, heavily thickened porose walls at the lobe base are distinctive. *Tuyamaella serratistipula* is commonly epiphyllous, and was collected on leaves from the Cardwell Range in North Queensland. Prof. Tamas Pocs has recognized this species for Australia; one of his specimens (Pocs 01102/BD) is cited in association with the listing of *Tuyamaella* in McCarthy (2003) in the Additional names section.
MAM Renner 1676 (NSW not yet accessioned)

New to New Zealand

Cololejeunea appressa.



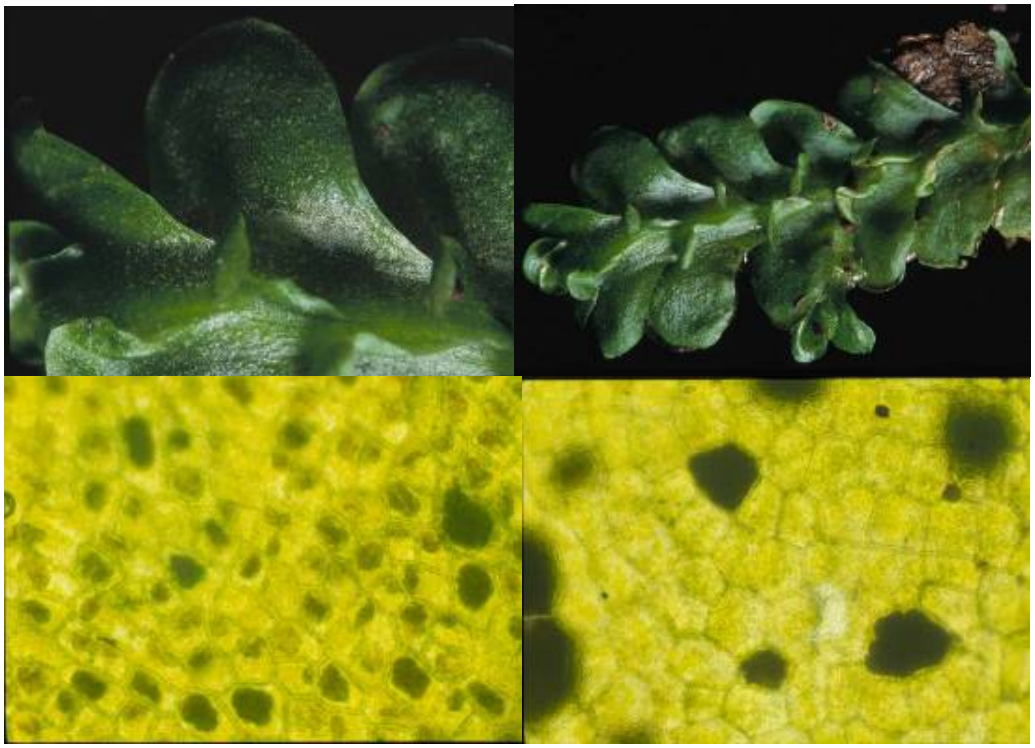
Cololejeunea appressa ocelli (left) shoot apex, showing single-celled styli (centre) and gemmae (right) JB

Cololejeunea appressa is the only member of *Cololejeunea* subg. *Taeniolejeunea* so far known from New Zealand. It is the only species in this region possessing a basal vitta of enlarged ocellate cells arranged in a row. The species is also distinctive for its tuberculate lobes, with a single tubercule over each cell, and its lobule apex, which bears two unicellular teeth that have the lobule apical papilla sandwiched between them. This species was described and illustrated by Evans (1906). *Cololejeunea appressa* is known from three localities in the far north of New Zealand's North Island where it is epiphyllous or less frequently corticolous in riparian vegetation in lowland forest. It grows in the same catchments as other tropical affinates, including *Dumortiera hirsuta* in the Herekino Forest, and *Stenolejeunea acuminata* at Radar Bush. New Zealand material agrees with the Jamaican material upon which the species was based in every detail presented by Evans, notably lobe and lobe cell size, and can be described thus:
Stem straight, 35-50 μm diam., 3 rows of cells in surface view. Leaf lobe ovate, lobule projecting below lobe margin almost completely. Lobe length 310-415 μm, Cell walls thick c 2um, small cell lumen 7-8 μm wide cells somewhat quadrate. Walls thick c.2mm wide with occasional intermediate thickenings often developed only on one side. At lobe tip marginal cells with both middle of lumen and walls projecting slightly. Marginal cells similar in size to those of lobe or slightly smaller. Ocelli prominent of 4-(5) cells in a single row, each with a single large oil body filling the lumen. Individually 27-44um long and 16-19 μm wide. Stylus a single large globose cell at the junction of lobule and stem. Lobule is ovoid to broadly flask shaped, 130 μm long 105 μm wide. The inner margin of the mouth bears 2 teeth, one of (1)-2 cells and on the side away from the keel another smaller triangular tooth the sharp apex of which is formed by the tip of a single cell. The lobule is almost completely offset from the leaf lobe and only overlaps the row of ocelli slightly.
New Zealand, North Island, Western Northland Ecological Region, Maungataniwha Ecological District, Herekino Forest 'Kiwanis Reserve', junction of Okahu Stream and small side stream, Epiphyll on *Beilschmiedia tarairi* leaves hanging over small stream 35°10' S, 173°16' E, 70m, J E Braggins 87096B, 20 Aug 1987, AK283840.

Drepanolejeunea pentadactyla

This species is distinctive in its coarsely toothed lobes, 1-5 teeth on both antical and postical lobe margins, and the 3-5 ocelli scattered through the leaf lobe. The plant is relatively small, and in New Zealand is known from a single collection, where it forms a loose thread like mat of yellow green shoots on *Beilschmiedia tarairi* leaves overhanging a stream. This species is abundant in the same microsite in subtropical and tropical rainforest on the North Eastern Coast of Australia north from Dorrigo National Park. New Zealand, North Island, Western Northland Ecological Region, Maungataniwha Ecological District, Mangamuka River, Mangamuka Gorge Scenic Reserve, picnic area by river at bottom of hill on S side of range. Taraire dominated broadleaf forest with some Towai and understory of Hangehange, Kanono. On twigs and leaves of Taraire overhanging stream, 40m, 35°12' S, 173° 30' E, MAM Renner 407, 23 Apr 2003, AK282773.

Is this *Treubia pygmaea*?



Treubia pygmaea lobules and habit (top left and right); and *Treubia pygmaea* (bottom left) and *Treubia lacunosa* (bottom right) lobe cells showing distribution and abundance of oil-bodies. JB.

We have collected a *Treubia* from Deer Valley, Lewis Pass of New Zealand's South Island that does not sit well within any species recognized for New Zealand, or so we think. Our material is unusual in that all the cells have oil bodies, and while the cells are all similar in size they are dimorphic, being ocellate or chlorophyllous. *Treubia lacunosa* and *T. lacunosoides* do not have oil-bodies in all cells, and ocellate cells are larger. *T. tasmanica* does not possess ocelli. This leaves only *T. pygmaea*, but our material does not fit well with an unpublished description by David Glenny based on several specimens (D.Glenny 8029, 8541, 9280 all in CHR).

Pfeiffer *et al*. (2002) recently suggested that *T. pygmaea* might be conspecific with, and encompassed within the variability of, *T. lacunosa*. They make this assertion based the fact that two specimens included in their study were intermediate between *T. lacunosa* and *T. pygmaea* in the oil-body character, having 50–80% of lobe marginal cells filled with oil-bodies, and had identical *trn*L_{UAA} intron sequences. Our plant agrees with Schuster's (1985) description of *T. pygmaea* in having oil-bodies in virtually all (>95%) lobe cells. This plant was collected from moist depressions on an alluvial terrace, where it crept over thick mats of other

bryophytes, including *Heteroscyphus billardierei, Dicranoloma robustum* and *Lepidogyna hodgsoniae*, so is at least as ecotypically distinct from *T. lacunosa* as is *T. lacunosoides*.
Until *T. pygmaea* is better known it is difficult to say with certainty whether our plant belongs to this species.

Treubia pygmaea (left) and *Treubia lacunosa* (right) showing gross morphological differences. JB

MAM Renner 963 (NSW, not yet accessioned).

References

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Pfeiffer T, W Frey & M Stech (2002) A new species of *Treubia* (Treubiaceae, Hepaticophytina) from New Zealand based on molecular evidence. *Nova Hedwigia* 75(1–2): 241–253.
Schuster RM. (1985) Austral Hepaticae XIX. Some taxa new to New Zealand and New Caledonia. *Phytologia* 56: 449–464.
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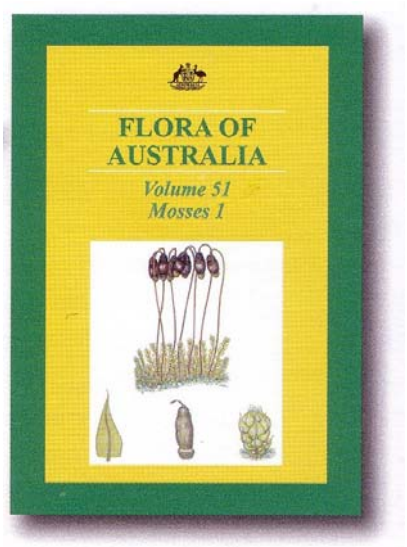
Matt A.M. Renner, University of Sydney & John Braggins, John Braggins Consultants, Auckland.

News and Notes

Pina Milne has taken up the permanent position of Collections Manager at the National Herbarium in Melbourne, Victoria (MEL) in May 2006. Pina will not be lost to bryology and is determined to continue her work on various diverse groups of mosses for the Bryophyte Flora of Australia and other bryological projects.
Paddy Dalton returned to his duties in the School of Plant Science in February 2007, following a seven-month study leave in the UK and Europe. During his time away he worked at the cryptogamic herbarium, Natural History Museum, London, attended the International Botanical Congress in Vienna and visited the Freie University and the herbarium at the Berlin-Dahlem Botanic Gardens, Germany.
Jessica Beever also spent a rewarding few weeks at the Natural History Museum, London, earlier this year. She was fortunate to catch up with Ida Bruggeman-Nanenga from the Netherlands and was delighted to spend “very happy *Fissidens* time together”.

Hot off the Press



Contents

- Includes a key to the more than 300 genera of mosses known from Australia and its island territories
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Forthcoming Workshops

22nd John Child Bryophyte Workshop

The next workshop will be based at the Boyle River Outdoor Education Centre, Lewis Pass, Canterbury, South Island, New Zealand from 18th January to 23rd January 2007.
The workshop will provide the opportunity to collect bryophytes and learn to recognize bryophytes in the field. Microscopes will be available for examination of these collections at the Lodge. Field trips will be undertaken to sites both east and west of the Main Divide and thereby provide a range of dry and wet habitats.
For further information contact the organizer: David Glenny, Landcare Research, PO Box 69, Lincoln 7640, New Zealand. Email: glennyd@landcareresearch.co.nz

IXth Australasian Bryophyte Workshop
Maydena, southwest Tasmania
Monday 3rd December to Saturday 8th December 2007

First Circular

The 9th Australasian Bryophyte Workshop will be based at Maydena, 90 km west of Hobart. Maydena is an old forestry township and is a convenient locality to access Tasmania's South West World Heritage area.

About the Workshop

Accommodation will be in self-contained cottages that can house up to 12 people. All towels, linen and bedding are provided. A fully licensed restaurant will cater for all meals. Further details on the accommodation and facilities offered can be found from the following website:
www.GiantsTable.com
Please note: There is no alternate style of accommodation at Maydena. The nearest suitable motel/hotels are 50 kms away in the town of New Norfolk.

There will be field trips for different interests and different physical abilities. A variety of vegetation types are readily accessible which will allow participants to explore areas of bryological interest. Trips planned will take in Tasmania's distinct cool temperate rainforest and button-grass sedgeland communities. Other areas of interest include the Styx and Florentine valleys where Tasmania's wet eucalypt forests contain the tallest hardwood tress in the world.
Time will be set-aside for special interest groups and concurrent sessions organized to cater for beginners and specialists. As usual there will be some evenings devoted to talks and poster presentations.
An area will be set up with limited microscopes (compound & stereo) to allow for detailed examination and identification of collections.

About Getting Here

There are daily flights into Tasmania from several Australian capital cities (Melbourne, Sydney & Brisbane). It is planned to leave Hobart (at the University of Tasmania) on Monday afternoon (3rd December) approximately 2pm in organized transport arriving at Maydena approx 4pm. We plan to return to Hobart on the Saturday morning (8th December) at approx 11am.

Approximate Cost

The best estimate at the moment in Australian dollars is between $500-600. This includes accommodation, all meals and transport to and from Maydena and during the workshop.

Plant Collections

Collecting will be possible in accord with our **permit conditions.**

Workshop Conveners

If there are further details you require then the conveners of the workshop are as follows:
Paddy Dalton: P.J.Dalton@utas.edu.au
Emma Pharo: epharo@utas.edu.au
Rod Seppelt: Rod.Seppelt@aad.gov.au

Expressions of Interest

As numbers will be limited, please complete the following form to register your interest and
Email to: P.J.Dalton@utas.edu.au or
Mail to: Paddy Dalton, School of Plant Science, University of Tasmania, Private Bag 55, Hobart, Tasmania 7001. Australia.

IXth Australasian Bryophyte Workshop

Maydena, Tasmania
3rd to 8th December 2007

Expression of Interest

Yes, I am interested in attending the Workshop

Name:……...

Address:……...

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Email:……...